38. MEGAPODIUS DUPERREYI, Less. & Garn.

Megapodius duperreyi, Less. & Garn. Bull. Sc. Nat. viii. p. 113 (1826), Dorey (type examined); Less. Voy. Coq. Zool. i. pt. 2, p. 700, 703, pl. 36 (1826–1828).

Megapode reinwardt, Temm. Pl. Col. livr. 37, genre *Megapode* (1823).

Megapodius rubripes, Temm. Pl. Col. 411 (25th October 1826[1]), Celebes! Amboyna!

Megapodius reinwardtii (sic), Temm. apud Wagl. Syst. Av. Gen. *Megapodius*, note (1827), descr. nulla.

Megapodius reinwardtii, Wagl. Syst. Av. Gen. *Megapodius*, Additamenta, sp. 4 (1827).

Megapodius rufipes, S. Müll., Verh. Land- en Volkenk. pp. 23, 109 (1839–1844), Utanata.

Megapodius, sp., Wall. Ann. & Mag. Nat. Hist. (2) xx. pp. 473, 477 (1857), Ké, Aru.

[No. 230. Female: eyes dull red; legs orange; bill horn-colour. —*J. M.*]

A female (No. 230) from Wokan.

39. NUMENIUS UROPYGIALIS, Gould.

[No. 258. Wanumbai, male.—*J. M.*]

40. TRINGOIDES HYPOLEUCUS (Linn.).

[No. 227. Dobbo, female: legs light green; bill dark green; eyes hazel; stomach contained insects.—*J. M.*]

7. On the Systematic Position of the Momotidæ. By A. H. GARROD, M.A., F.R.S., Prosector to the Society.

[Received December 3, 1877.]

In my paper on certain muscles of birds and their value in classification[2], I have made an error, which I desire to correct, with reference to the systematic position of the Momotidæ. I there included them with the Coraciidæ as part of a single family, characterized among the Anomalogonatæ by the possession of a nude oil-gland, together with colic cæca. Since the time my paper appeared, I have had the opportunity of dissecting several species of Momotidæ, thanks to the kindness of Mr. O. Salvin, including *Momotus lessoni*, *M. æquatoriàlis*, *M. brasiliensis* (a specimen which had lived in the Society's Gardens), *Hylomanes gularis*, and *Eumomota superciliaris*; and I find that in none of these are colic cæca present.

Further, in *Hylomanes gularis* and *Eumomota superciliaris* I find

[1] I doubt whether this date, given by Crotch (Ibis, 1868, p. 500), for the publication of the 69th livraison of Temminck's 'Planches Coloriées,' is exact; my doubts rise from the fact that *M. rubripes* is not mentioned by Wagler in his 'Systema Avium,' published in 1827.

[2] P. Z. S. 1874, p. 123.

a minute tuft on the apex of the oil-gland, although in the several species of *Momotus* there is no trace of any tuft; in fact they have lost it, evidently since the family was differentiated off.

Such being the case, the Momotidæ must be placed with the Piciformes, as defined by me, instead of with the Passeriformes; and the amended arrangement may be thus tabulated, the Todidæ and Momotidæ almost certainly forming a single family, as has been suggested by many, and which is confirmed by the observation made by Dr. Murie that in the Todidæ the beak is serrate [1].

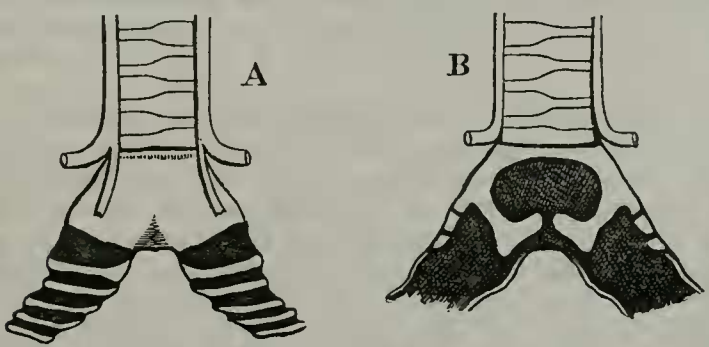
ANOMALOGONATÆ.

Aves Piciformes.	*Aves Passeriformes.*
Bucerotidæ.	Coraciidæ.
Alcedinidæ.	Steatornithidæ.
Momotidæ.	Caprimulgidæ.
Todidæ.	Galbulidæ.
Ramphastidæ.	Meropidæ.
Capitonidæ.	Trogonidæ.
Pici.	Bucconidæ (?).
	Passeres.

In further favour of the inclusion of the Momotidæ with the Piciformes may be mentioned the pterylographic peculiarity found in them all, namely that the outer pectoral branch of the inferior tract is separated almost entirely from the inner branch, with which it blends for nearly its whole distance, or entirely, in the Passeriformes.

From a skin, I have been able to determine that the deep flexor tendons of the leg of *Todus viridis* are arranged on exactly the same plan in it as in the Momotidæ [2], and that its tensor patagii brevis also terminates in exactly the same manner as it does in them [3].

The syrinx of the Momotidæ has never been fully described, so far as I am aware. I therefore exhibit a figure of it as it appears in



Syrinx of *Momotus lessoni*.

Momotus lessoni, which resembles that of the other species which I have examined. Fig. A is the anterior view; B, the posterior.

[1] P. Z. S. 1872, p. 671.
[2] *Vide* P. Z. S. 1875, p. 344.
[3] *Vide* P. Z. S. 1876, p. 511.

The large cartilaginous three-way piece, in which the trachea terminates inferiorly, is compound, being formed of several fixed rings. It is complete in front, being represented behind by a hooked process on either side, extending inwards towards the middle line, where the two nearly meet. The lateral muscles of the trachea extend down to the upper margin of this peculiar syrinx; and a few of their anterior fibres continue onwards to the surface of the cartilaginous box, where they terminate, sometimes higher and sometimes lower, but always before reaching its inferior margin.

8. Note on the Gizzard and other Organs of *Carpophaga latrans*. By A. H. Garrod, M.A., F.R.S., Prosector to the Society.

[Received December 3, 1877.]

In the collection of birds preserved in spirit by H.M.S. 'Challenger' is the body, after the skin had been removed, of a single specimen of *Carpophaga latrans*, together with the gizzard of a second individual of the same species, obtained at Kandavu, Fiji. These form the material for the present communication.

In his note-book Mr. John Murrray makes the following remarks on the species[1]:—"Stomach contained the fruit of some tree unknown to me. The coat of the stomach had hard papilla-like ossifications of a circular form, two or three rows. . . . These indurations are composed of a horny substance"—from which it is seen that Mr. Murray was the first to recognize the existence of the strange arrangement to be here described.

The thin-walled and capacious crop contained only one thing in its interior—a complete fruit, which has been identified for me by Mr. W. T. Thiselton Dyer, as that of *Oncocarpus vitiensis*. In the gizzard was also found a portion of a second example of the same fruit.

Oncocarpus vitiensis is a tree belonging to the natural order Anacardiaceæ, which, according to Dr. Seemann[2], is "about sixty feet high, bearing large oblong leaves and a very curious corky fruit, somewhat resembling the seed of a walnut." The tree is included among those which are poisonous by the Fijians; and its sap produces an intense itching of the skin, when brought into contact with it, whence the native name Kau Karo or itch-wood.

For the crushing of this very hard fruit a special anatomical modification of the gizzard-walls of this Fruit-pigeon is developed, which is peculiarly interesting and tends to prove the plasticity of organs when aberrant forces come into play.

The gizzard is not developed to any thing like the extent that it is

[1] *Vide* P. Z. S. 1877, p. 737.
[2] Seeman's Mission to Viti, p. 334.